

U.S. Department of the Interior  
Bureau of Land Management  
Little Snake Field Office  
455 Emerson Street  
Craig, CO 81625-1129

**ENVIRONMENTAL ASSESSMENT**

**EA-NUMBER:** DOI-BLM-CO-N010-2012-0017-EA

**PERMIT/LEASE NUMBER:** N/A

**PROJECT NAME:** Routt Willow Cr. Fuels Reduction

**LEGAL DESCRIPTION:** The project is located in all or a portion of the following sections:

6<sup>th</sup> PM, T9N, R85W, Sections 3 and 4  
Routt County, Colorado

**APPLICANT:** BLM

**LAND USE PLAN (LUP) CONFORMANCE REVIEW:** The proposed action was reviewed for conformance (43 CFR 1610.5, BLM 1617.3) with the following plan:

Name of Plan: Little Snake Record of Decision and Resource Management Plan

Date Approved: October 2011

Results: The Proposed Action is in conformance with the LUP because it is specifically provided for in the following LUP goals, objectives, and management decisions:

Section/Page:

Wildland Fire Management - page RMP-27.

Give first priority to protection of life or property by implementing the objective to identify and reduce hazardous fuels, with an emphasis on urban interface area

Forestry – page RMP-51

Manage forest and woodland communities that are resilient to disturbances from insects, disease, and wildfires.

Vegetation – page RMP-15

Manage for healthy forest and woodland communities by implementing the objective to manage forests and woodlands to improve forest resiliency to disturbances from insects, disease, and wildfires; restore habitats for special status species; and produce a sustainable supply of forest products.

## **RELATIONSHIP TO STATUTES, REGULATIONS, OR OTHER PLANS:**

Northwest Colorado Fire Management Program Fire Management Plan: The proposed action falls within the B1-L polygon, Urban-Interface. This polygon is identified as a high priority for fuels reduction projects that provide community protection.

The Proposed Action implements actions recommended in the following Plans, Acts, and Policies:

National Fire Plan of 2000

Collaborative Approach to Reducing Wildland Fire Risks to Communities and the Environment  
10-Year Comprehensive Strategy Implementation Plan of May 2002.

Federal Land Assistance, Management and Assistance Act of 2009.

Healthy Forest Restoration Act of 2003

**PURPOSE AND NEED:** In accordance with the National Fire Plan of 2000, public agencies are directed to take actions to reduce hazardous fuels, especially in those areas where communities and human development are at risk from wildfire. The Little Snake Fire Management Plan (March 2000, updated annually), identifies areas where fuels reduction treatments are desired and needed. The North Routt Fire Protection District Community Wildfire Protection Plan has identified the need for hazardous fuels reduction in and around the Willow Creek subdivision as a high priority. Inherent to complying with these plans is the need to reduce fuels to help protect life, property, and natural resources. The Willow Creek subdivision Homeowners Association has expressed interest in working with the Bureau of Land Management in removing dead lodgepole pine on BLM as well as private lands in and around the subdivision in an effort to reduce the threat from wildfire. Reducing hazardous fuel loading would lower the risk of wildfires causing damage to community homes and property by reducing fire behavior intensity and the range of environmental conditions under which fire can actively spread. This would allow fire suppression forces to be more effective and provide a safer fire environment to work in.

**PUBLIC SCOPING PROCESS:** The project is listed on the NEPA log on the Little Snake Field Office website: [http://www.blm.gov/co/st/en/BLM\\_Information/nepa/lsofo.html](http://www.blm.gov/co/st/en/BLM_Information/nepa/lsofo.html). The Willow Creek Homeowners Association has been kept advised of this project's progress at their homeowners association meetings. Additionally, the Colorado State Forest Service has been an active partner in this proposal.

## **DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:**

**NO ACTION ALTERNATIVE:** Under this alternative, no hazardous fuel reduction activities would occur. Dead and dying trees would not be removed resulting in no change to the elevated wildfire and tree falling hazard threatening the Willow Creek subdivision. The salvage value of the timber would not be realized if the project is not undertaken.

The old cabin would not be removed and continue to degrade becoming a possible hazard to the visiting public.

## **PROPOSED ACTION:**

**Description of Proposed Action:** The BLM is proposing to use mechanical treatments to remove currently infested, and beetle/disease susceptible trees on two units totaling 13 acres adjacent to the Willow Creek subdivision approximately 21 miles north of Steamboat Springs, CO. Trees likely to be wind-thrown soon after treatment, if left standing, would be removed as well. Smaller diameter lodgepole pine and other conifer trees, as well as aspen, would be retained where feasible. This project would likely occur in conjunction with similar work on Willow Creek Subdivision open space lands adjacent to the BLM property.

Treating this area through a contracted conventional logging operation is recommended due to the number of dead and/or dying trees in this area and the proximity to the Willow Creek Subdivision. The fire danger to this neighborhood is increased by the fact that all this fuel lies downhill from the homes. Falling trees do, in some cases, pose a moderate threat to people and property as well. There are a few areas where the slope gets relatively steep, but with proper planning the logging equipment could work around this.

Prescription for both units would involve harvesting, not only the dead trees but also all species with a d.b.h (diameter breast height) of 10 inches or greater with the exception of aspen stands greater than .1 acre. This is due to the tendency for trees to blow down after a percentage of the stems have been removed. The shorter, smaller diameter trees can survive the change in stand structure more effectively than the larger taller trees.

Table 2 compares the current stocking level to the post harvest stocking level.

Table 2

|                             | <b><u>QMD</u></b><br>(Quadratic Mean Diameter) | <b><u>Trees/Acre</u></b> | <b><u>Basal Area/Acre</u></b> |
|-----------------------------|--|--------------------------|-------------------------------|
| <b><u>Current-</u></b>      |  |                          |                               |
| Unit 1                      | 12.2 in.                                       | 408                      | 92                            |
| Unit 2                      | 8.6 in.  | 113                      | 166                           |
| <b><u>Post Harvest-</u></b> |  |                          |                               |
| Unit 1                      | 7.2in.   | 29                       | 8                             |
| Unit 2                      | 7.2in.   | 176                      | 50                            |

Table 3 compares the volume of both live and dead wood that would be removed in both unit 1 and unit 2. It is separated out into the various tree species and then a total for all species. The standard error was a little higher than desired for unit 1 to calculate these numbers, but that was due to the high variableness of the tree species, size and distribution.

Table 3

### **Unit 1**

| <b><u>Species</u></b> | <b><u>Merchantable</u></b> | <b><u>Merchantable</u></b> | <b><u>Harvested Bd Ft</u></b> | <b><u># Harvested TPA</u></b> |
|-----------------------|----------------------------|----------------------------|-------------------------------|-------------------------------|
|                       | <b><u>Live Bd Ft</u></b>   | <b><u>Dead Bd Ft</u></b>   |                               |                               |
| <b>Total</b>          | 1562                       | 2972                       | 4437                          | 85                            |
| <b>AF</b>             | 345                        | 0                          | 345                           | 6                             |
| <b>DF</b>             | 265                        | 0                          | 265                           | 4                             |
| <b>LP</b>             | 951                        | 2632                       | 3485                          | 71                            |
| <b>ES</b>             | 0                          | 340                        | 340                           | 2                             |
| <b>AS</b>             | 0                          | 0                          | 0                             | 0                             |

### **Unit 2**

| <b><u>Species</u></b> | <b><u>Merchantable</u></b> | <b><u>Merchantable</u></b> | <b><u>Harvested Bd Ft</u></b> | <b><u># Harvested TPA</u></b> |
|-----------------------|----------------------------|----------------------------|-------------------------------|-------------------------------|
|                       | <b><u>Live Bd Ft</u></b>   | <b><u>Dead Bd Ft</u></b>   |                               |                               |
| <b>Total</b>          | 4726                       | 1494                       | 5897                          | 233                           |
| <b>AF</b>             | 1734                       | 995                        | 2743                          | 57                            |
| <b>LP</b>             | 0                          | 143                        | 143                           | 10                            |
| <b>ES</b>             | 1246                       | 0                          | 1246                          | 15                            |
| <b>AS</b>             | 1745                       | 355                        | 1763                          | 149                           |

To facilitate harvest, approximately 500 feet of existing road may need to be improved to decrease skidding distances. 200 feet or less of new road may need to be constructed in Unit 2 to facilitate skidding logs to the existing road. Some site leveling may be required at the two landing locations depicted on the attached map. Cull logs and tops of trees would be offered for sale as biomass. Remaining slash would be piled and burned, placed on temporary roads, or lopped and scattered. Following the completion of harvest, piles would be burned during the winter by the BLM when adequate snow depth is present and consistent with burn plan requirements and burning permit stipulations. Following are some additional design features of the proposed action:

- Temporary road locations will be approved by the BLM prior to development.
- After harvest operations, temporary roads would be outsloped, and roads and landings would be scarified, as necessary. Temporary roads, landings and, as necessary, major skid trails, would be seeded with a BLM approved mixture of forbs and grasses by the contractor

- The BLM would monitor disturbed areas for noxious weeds for two growing seasons after the project is completed. Noxious weed control, if needed, would be coordinated by the BLM.
- If encountered, wetland and riparian vegetation would have a 325-foot buffer from disturbance to protect water quality.
- Improvements in the project area would be protected. Damage to improvements shall be promptly paid for or repaired (by the Contractor) to a condition which is at least as good as the condition just prior to such damage. This includes a fence that runs along the BLM/private boundary and a power line adjacent to County Road 129.
- If an active goshawk nest is located within unit, a 1/8<sup>th</sup> mile buffer around the nest site would be required.
- No activities will be conducted from 16 April to 30 June in elk calving areas to prevent disturbance and added stress during the calving season.

In addition to the fuels reduction work, it is proposed to remove an old cabin located on BLM land within the treatment area. This single room cabin may have been used with livestock grazing operations many years ago but was never officially authorized by the BLM and is no longer being used. It is proposed to demolish and remove all materials associated with the cabin. This would likely be done by a private contractor in conjunction with the fuels reduction work. There is a road within 50 feet of the cabin so no new road construction would be necessary. The same design features or stipulations mentioned above would apply to cabin removal operations.

## **AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES/MITIGATION**

For the following resources and issues, those brought forward for analysis will be addressed below.

| <b>Resource/Issue</b>                   | <b>N/A or Not Present</b> | <b>Applicable or Present, No Impact</b> | <b>Applicable &amp; Present and Brought Forward for Analysis</b> |
|---|---------------------------|---|--|
| Air Quality                             |                           | X                                       |  |
| Areas of Critical Environmental Concern | X                         |   |  |
| Cultural Resources                      |                           |   | X  |
| Environmental Justice                   |                           |   | X  |
| Flood Plains                            | X                         |   |  |
| Fluid Minerals                          |                           | X                                       |  |
| Forest Management                       |                           |   | X  |
| Hydrology/Ground                        |                           | X                                       |  |
| Hydrology/Surface                       |                           | X                                       |  |
| Invasive, Non-native Species            |                           |   | X  |
| Lands with Wilderness Characteristics   | X                         |   |  |
| Native American Religious Concerns      |                           |   | X  |
| Migratory Birds                         |                           |   | X  |
| Paleontology                            |                           |   | X  |
| Prime and Unique Farmland               | X                         |   |  |
| Range Management                        |                           | X                                       |  |
| Realty Authorizations                   |                           |   | X  |
| Recreation/Transportation               |                           | X                                       |  |
| Socio-Economics                         |                           | X                                       |  |
| Soils                                   |                           |   | X  |
| Solid Minerals                          |                           | X                                       |  |
| T&E and Sensitive Animals               |                           |   | X  |
| T&E and Sensitive Plants                | X                         |   |  |
| Upland Vegetation                       |                           |   | X  |
| Visual Resources                        |                           | X                                       |  |
| Wastes, Hazardous or Solid              |                           | X                                       |  |
| Water Quality - Ground                  |                           | X                                       |  |
| Water Quality - Surface                 |                           |   | X  |
| Wetlands and Riparian Resources         | X                         |   |  |
| Wild and Scenic Rivers                  | X                         |   |  |
| Wilderness Study Areas (WSAs)           | X                         |   |  |
| Wildlife, Aquatic                       | X                         |   |  |
| Wildlife, Terrestrial                   |                           |   | X  |

## **AIR QUALITY**

**Affected Environment:** There are five federal Class I areas within 100 kilometers of the Little Snake Resource Management Area boundary, all of which occur in Colorado. There are no federal Class I areas in Utah or Wyoming within 100 km of the LS RMA boundary. There are no non-attainment areas nearby that would be affected by either alternative.

**Environmental Consequences, Proposed Action:** Landscapes treated with fuel reduction treatments are expected to cause fewer air quality impacts both in the short and the long term because of the incremental reduction of fuels and the periodic release of small amounts of air quality pollutants. Pollutant emissions released at this smaller scale are not expected to cause air quality impairment to urban areas or Class I areas, or if they do would be of a much shorter duration. Smoke production from pile burning will be visible to area residents and motorists on county road 129 but is not expected to exceed national PM<sub>2.5</sub> and PM<sub>10</sub> ambient air quality standards. The BLM is required to obtain an open burning permit from the Colorado State Air Pollution control Division who specifies what environmental conditions must exist in order to burn the piles. Mechanical treatments as proposed would not be expected to affect air quality other than localized short term dust production.

**Environmental Consequences, No Action Alternative:** The direct environmental consequences associated with fuels reduction activities would be absent in the no action alternative. However, in the long term it would be possible to have a substantially greater air quality impairment episode as a result of increasing the potential for large scale uncontrolled wildfires. A large fire in this area has the potential to impact air quality of urban areas and reduce visibility within the five Class 1 areas.

**Mitigative Measures:** None

## **CULTURAL RESOURCES**

**Affected Environment:** Elements of fuels reduction and the removal of structures are considered undertakings under Section 106 of the National Historic Preservation Act (NHPA).

BLM has the legal responsibility to take into account the effects of its actions on cultural resources located on federal land. BLM Manual 8100 Series, the Colorado State Protocol and BLM Colorado Handbook of Guidelines and Procedures for Identification, Evaluation, and Mitigation of Cultural Resources provide guidance on how to accomplish Section 106 requirements with the appropriate cultural resource standards. Section 106 of NHPA requires federal agencies to: 1) inventory cultural resources to be affected by federal undertakings, 2) evaluate the importance of cultural resources by determining their eligibility to the National Register of Historic Places (National Register), and 3) consult with the federal and state preservation agencies regarding inventory results, National Register eligibility determinations, and proposed methods to avoid or mitigate impact to eligible sites. Within the state of Colorado, BLM's NHPA obligations are carried out under a Programmatic Agreement between BLM, the Advisory Council on Historic Preservation, and the State Historic Preservation Officer. If the

undertaking is determined to have “no effect” or “no adverse effect” by the BLM Little Snake Field Office archaeologist then it may proceed under the terms of the Programmatic Agreement. If the undertaking is determined to have “adverse effects” then consultation is initiated with the SHPO.

The prehistoric and historic cultural context for northwestern Colorado has been described in several recent regional contexts. Reed and Metcalf’s (1999) context for the Northern Colorado River Basin is applicable for the prehistoric context and historical contexts include overviews compiled by Frederic J. Athearn (1982) and Michael B. Husband (1984). A historical archaeology context has also been prepared for the state of Colorado by Church and others (2007).

The proposed undertaking project has undergone a cultural resource study:

Collins, Gary

2011 A Cultural Resource Reconnaissance of the Proposed Willow Creek Fuels Reduction Project, BLM-Little Snake Field Office Routt County, Colorado. BLM-LSFO#10.50.2011. OAH#RT.LM.R97. Bureau of Land Management Little Snake Field Office, Craig, Colorado.

This study did not identify any archaeological or historical sites eligible for the National Register within the area of potential effect for the proposed undertaking.

Environmental Consequences, Proposed Action: Impacts to cultural resources from prescribed fire are largely associated with fire management activities. Fireline construction (hand line or bulldozer), establishment of helicopter bases, fire camps, and related activities can all impact cultural resources. All of these activities involve ground disturbing activities which can destroy the integrity of a site. Impacts from mechanical treatment involve the use of heavy tracked and rubber tired vehicles which can involve substantial ground disturbance which can destroy the integrity of a site. Prehistoric and historic structures are also threatened by mechanical treatment particularly those which are hard to identify from the natural environment such as wickiups. Scattered mulch has the potential to protect sites from the elements but does impact integrity. The piling of slash piles can also impact integrity of a cultural resource particularly if a pile is placed on a site or near a historic structure detracting from its integrity. Slash piles are usually removed or burned. Secondary impacts from prescribed fire and mechanical treatment include increased visibility of surface artifacts until vegetation returns. This increased visibility can lead to artifact collecting by recreationalists and artifact hunters. Other secondary impacts to cultural resources include tree fall and increased erosion.

This study did not identify any archaeological or historical sites eligible for the National Register within the area of potential effect for the proposed undertaking. The proposed undertaking will have no effect on historic properties. It may proceed as described with the following standard mitigative measures in place.

Mitigative Measures, Proposed Action:

1. Any cultural and/or paleontological (fossil) resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land

shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and the authorized officer will make any decision as to proper mitigation measures after consulting with the holder.

2. The operator is responsible for informing all persons who are associated with the operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are encountered or uncovered during any project activities, the operator is to immediately stop activities in the immediate vicinity of the find and immediately contact the authorized officer (AO) at (970) 826-5000. Within five working days, the AO will inform the operator as to:
  - Whether the materials appear eligible for the National Register of Historic Places;
  - The mitigation measures the operator will likely have to undertake before the identified area can be used for project activities again; and
  - Pursuant to 43 CFR 10.4(g) (Federal Register Notice, Monday, December 4, 1995, Vol. 60, No. 232) the holder of this authorization must notify the AO, by telephone at (970) 826-5000, and with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.
3. If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

Environmental Consequences, No Action Alternative: The direct environmental consequences associated with fuels reduction activities would be absent in the no action alternative. However, the increased potential for large scale uncontrolled wildfires if no prescribed fire or mechanical thinning was undertaken increases the risk to any structural archaeological or historic sites in the area. Increased erosion after a large scale fire also has the potential to adversely affect buried cultural material. There would be no effect to cultural resources if the cabin and associated material was not removed.

Mitigative Measures, No Action Alternative: None

## References

Athearn, Frederic J.

1982 *An Isolated Empire: A History of Northwest Colorado*. Bureau of Land Management-COLORADO. Cultural Resource Series No. 2, Second Edition. Denver.

Church, Minette C., Steven G. Baker, Bonnie J. Clark, Richard f. Carrillo, Jonathan C. Horn, Carl D. Spath, David R. Guilfoyle, and E. Steve Cassells

2007 *Colorado History: A Context for Historical Archaeology*. Colorado Council of Professional Archaeologists, Denver.

Husband, Michael B.

1984 *Plateau Country Historic Context*. Office of Archaeology and Historic Preservation, State Historic Preservation Office, Denver.

Reed, Alan D. and Michael Metcalf

1999 *Colorado Prehistory: A Context for the Northern Colorado River Basin*. Colorado Council of Professional Archaeologists, Denver, Colorado.

## ENVIRONMENTAL JUSTICE

Affected Environment: Executive Order 12898 (20) requires federal agencies to assess projects to ensure there is no disproportionately high or adverse environmental, health, or safety effects on minority and low-income populations. Minorities comprise a small proportion of the population residing inside the boundaries of the Little Snake Field Office.

Environmental Consequences, Proposed Action: It is not likely that the proposed project activities would generate high levels of concern, opposition, or dissatisfaction among local residents. A small, temporary increase in activity and noise disturbance may occur in rural subdivisions. No minority or low income populations would be directly affected in the vicinity of the proposed action.

Environmental Consequences, No Action alternative: No minority or low income populations would be directly affected in the vicinity of the proposed action.

Mitigative Measures: None

## FORESTRY

Affected Environment: A cruise was conducted between December 15<sup>th</sup> and 30<sup>th</sup> to gather information pertinent to a possible harvest. The property was divided into two units due to the distribution of the forested land.

Unit 1 is the southernmost unit. It is predominately east facing with a slope range from 10% to 40%+. The overstory of this unit is largely lodgepole pine that has been heavily infested with

mountain pine beetle. Most of the lodgepole are still standing, but about three quarters of them are standing dead with the remaining quarter being live, but infested. Other species in this unit include subalpine fir, aspen, and Engelmann spruce. This unit is highly variable in the species present, diameter classes and spatial distribution of trees.

Unit 2 is the northernmost unit. This unit is north facing with a slope range of 5% to 35%+. Aspen and subalpine fir are co-dominate in this unit. Lodgepole pine is also present, but to a lesser degree. Although not many beetle kill lodgepole were surveyed in the area, there were a number of pockets of dead subalpine fir keeping the fire danger higher here as well. This unit was a more homogeneous than Unit 1, is still quite variable in terms of species make up and spatial distribution.

Environmental Consequences, Proposed Action: Under the Proposed Action, all dead or infested lodgepole pine and any species 10 inches and greater DBH would be cut. The harvest of beetle-killed pine would facilitate successful stand regeneration by exposing bare mineral soil and allowing more sunlight to penetrate to the forest floor. Harvest practices would result in cones being distributed over the site, in close proximity to mineral soil where high surface temperatures would open the cones. Seed germination in mineral soil increases chances of seedling survival because seedlings are better able to withstand dry conditions. Aspen suckering would likely be stimulated resulting in aspen increasing in coverage. Reducing stand densities would reduce competition for sunlight, water, and nutrients, resulting in increased vigor of remaining trees. Removing trees with dwarf mistletoe would also improve stand health.

Current fire hazard of a potential crown fire would be reduced within the units as aerial fuels would be reduced. Surface fuel loading would increase in the short-term with the addition of slash but that increase would be reduced by slash treatments identified in design criteria. Following treatment, winter snow loads on remaining slash would further reduce slash depth. Increased, long-term fuel loading as a result of falling trees within the units would be avoided as a result of harvesting dead, infested and susceptible trees.

Environmental Consequences, No Action Alternative: Under this alternative no trees would be removed from the site. Dead and dying trees will remain standing for another 5 – 20 years barring a strong wind event. Dead trees will then start falling creating a jackstraw of logs across the surface. As diseased trees die and needles and small limbs begin to fall off, more sun and soil moisture is available to remaining live trees (primarily subalpine fir followed by Engelmann spruce and aspen). These species will experience rapid growth until natural regeneration of lodgepole pine and other species increases to create tight crown cover and competition for sun and soil moisture. No salvage value for the dead and dying trees would be realized if the the project is not implemented.

Mitigative Measures: None.

## **INVASIVE, NONNATIVE SPECIES**

Affected Environment: Invasive and noxious weeds are present in the area. Invasive annuals

such as downy brome (cheatgrass) and yellow alyssum are common, occupying disturbed areas. Invasive annual weeds are typically established on disturbed and high traffic areas whereas biennial and perennial noxious weeds are less common in occurrence. Colorado noxious weeds that are present within the project areas include hound's tongue, hoary cress, Dalmatian toadflax, Canada thistle and other biennial thistles. The BLM cooperates with Routt County Weed Management program to employ the principals of Integrated Pest Management to control noxious weeds on public lands within the area of this project.

Environmental Consequences, Proposed Action: The surface disturbing activities and associated traffic involved with the proposed action would create an environment and provide a mode of transport for invasive species and other noxious weeds to become established. Construction equipment and any other vehicles brought onto the sites can introduce weed species. Wind, water, recreation vehicles, livestock and wildlife would also assist with the distribution of weed seed into the newly disturbed areas. The annual invasive weed species (downy brome, yellow alyssum, blue mustard and other annual weeds) occur on adjacent areas and would occupy the disturbed areas. Establishment of seeded vegetation is expected to provide the necessary control of invasive annual weeds within 2 or 3 years.

The perennial and biennial noxious weeds in the area are less frequently established on the uplands but some potential exists for their establishment in draws and swales or areas that would collect additional water. The largest concern in the project area would be for these species to become established and not be detected, providing seed which can be moved onto adjacent rangelands. Subsequent monitoring and control of noxious weeds in the project area would reduce the potential for weeds to spread.

Environmental Consequences, No Action alternative: There would be no affect to invasive species under this alternative.

Mitigative Measures: None

## **MIGRATORY BIRDS**

Affected Environment: BLM Instruction Memorandum No. 2008-050 provides guidance towards meeting BLM's responsibilities under the Migratory Bird Treaty Act (MBTA) and Executive Order (EO) 13186. The guidance emphasizes management of habitat for species of conservation concern by avoiding or minimizing negative impacts and restoring and enhancing habitat quality. The project area provides both foraging and nesting habitat for a variety of migratory bird species including ruby-crowned kinglet, yellow-rumped warbler, hermit thrush, red crossbill, pine siskin, mountain chickadee, gray-headed junco, pine grosbeak, gray jay, red-breasted nuthatch, warbling vireo, house wren, red-naped sapsucker, Northern flicker, tree swallow, western wood-pewee, Violet-green swallow, American robin, mountain bluebird, yellow-rumped warbler and gray-headed junco. One species on the U.S. Fish & Wildlife Service (USFWS) List of Conservation Concern (2008) occupy these habitats within the project area.

Specific to the project area, native plant communities are comprised of lodgepole pine, aspen Engelmann spruce and subalpine fir. Species that occur on the BCC that may utilize these

forests is the Flammulated owl. Habitat quality for forest species has been reduced due to the mountain pine beetle infestation in lodgepole pine trees and dead subalpine fir trees. There are no known active raptor nests in the vicinity of the proposed action.

Environmental Consequences, Proposed Action: Migratory birds inhabiting the proposed project area would likely move from the area during road improvement, temporary road construction, and subsequent timber harvest activities. This displacement would be short term and birds would move back into the area once the proposed project is complete. Some nest trees could be removed by the proposed project, however, a sufficient number of trees would remain to provide nesting habitat for birds. The proposed project would benefit some ground nesting species since tree harvest would open the forest canopy and allow grasses, forbs, and shrubs to establish. Additional food and cover for ground nesting species would be added to the treated areas by tree removal.

Environmental Consequences, No Action Alternative: Mechanical treatments to harvest dead, currently infested, and beetle-disease susceptible trees, as well as associated actions such as temporary road construction, would not occur. Dense stands of young, regenerated lodgepole pine would not be thinned. The structure of the vegetation in the project area would not change and the area would become more susceptible to a large-scale wildfire. This could result in a long-term change in the habitat which could adversely impact some tree nesting species since fire would likely remove more trees than the proposed harvest project. With the No Action alternative, ground vegetation would decrease in the closed canopy forest habitat and could continue to preclude some migratory bird use of the proposed project area.

Mitigative Measures: None.

## **NATIVE AMERICAN RELIGIOUS CONCERNS**

Letters were sent to the Uinta and Ouray Tribal Council, Southern Ute Tribal Council, Ute Mountain Utes Tribal Council, Shoshoni Tribal Historic Preservation Officer, and the Colorado Commission of Indian Affairs in the spring of 2011 discussing upcoming projects the BLM would be working on in FY10 and FY11. Letters were followed up with phone calls. No comments were received (Letters on file at the Little Snake Field Office, Craig, Colorado).

## **PALEONTOLOGY**

Affected Environment: Occurrences of paleontological resources are closely tied to the geologic units that contain them. Using the PFYC system, geologic units are classified based on the relative abundance of fossils and their sensitivity to adverse impacts. The proposed action area contains geologic units that range from the lowest class (1) to the highest class (5). A paleontology survey was undertaken in the area with no findings discovered.

Environmental Consequences, Proposed Action: The highest PFYC classification (5) is contained in Unit 1 shown on the attached map. There will be no ground disturbance in this area. The fossil discovery impact potential is very low.

Mitigative Measures: Due to the PFYC class 5, the inclusion of mitigative measures is warranted. If discovered, this impact can be effectively mitigated by ceasing operations and notifying the Field Office Manager immediately upon discovery of a fossil during construction activities. An assessment of the significance is made and a plan to retrieve the fossil or the information from the fossil is developed.

Environmental Consequences, No Action Alternative: No impacts to existing paleontology would occur.

## **REALTY AUTHORIZATIONS**

Affected Environment: Public land in the proposed hazardous fuels treatment area is encumbered with several rights-of-way. An above ground power line, a buried telephone line, and county road easement are authorized on public land in the proposed project area. An above ground transformer and power line to the cabin were removed during the summer of 2011.

Environmental Consequences, Proposed Action: Hazardous fuels treatment in close proximity to authorized rights-of-way is designed so project activities should not result in failures or service interruption. Existing buried facilities could be accidentally damaged during road construction and/or cabin removal activities on public land. Impacts would be temporary until any damage is repaired. With implementation of the mitigative measures below, the project should result in no adverse impacts.

Mitigative Measures: Potential damage to existing rights-of-way would be minimized by the following actions:

- Avoid existing rights-of-way during any new construction and hazardous fuels treatment.
- Utilize the “One Call” system to locate and stake the centerline and limits of all underground facilities in the area prior to new construction.
- Provide 48-hour notice to the owner/operator of all facilities prior to performing any new construction work or hazardous fuels treatment near existing rights-of-way.

Environmental Consequences, No Action Alternative: No impacts to existing realty authorizations would occur.

## **SOILS**

Affected Environment: Soils underlying the proposed project areas are Dorpat and Rabbit Ears loams. These base slope soil types have up to 25% slope, are well-drained, and have moderate to high available water capacity. Mean annual precipitation is between 19-28” for the area.

Environmental Consequences, Proposed Action: Equipment used for the proposed project would include a combination of skidders, forwarders, and harvesters. Any vegetation management activity that causes mechanical soil disturbance can have negative impacts to soil productivity, nutrient cycling, soil cover, and vegetation recovery. These impacts are common to any type of soil disturbance. There is a risk of compaction from the equipment used in the project, which

could increase surface flows and erosion, a potential hazard in this terrain. However, if cover limits are maintained these effects would be reduced. Effects would also be reduced if the treatment is only performed on dry or frozen ground, thereby decreasing ruts and new overland flow patterns. Removing and/or thinning woody vegetation in the area would enable herbaceous vegetation to flourish over the short term, providing increased soil stability over the long term.

Environmental Consequences, No Action Alternative: Environmental Consequences, No Action Alternative: There would be no direct impacts to the soil resource if no actions are implemented. However, the threat of larger more intense fires occurring under extremely dry conditions exists if fuel reduction treatments are not implemented. The scale and duration of adverse soil effects would be much higher under the burning conditions that exist for large fire occurrence.

Mitigative Measures: None

## **T&E SPECIES – ANIMALS**

Affected Environment: No threatened or endangered animal species or suitable habitat is known to exist in the project area. Based on vegetation and surrounding habitat, Northern goshawks, a BLM designated sensitive species, may be summer residents of the proposed project area. Surveys conducted by the Colorado Breeding Bird Atlas Partnership recorded goshawks near the project area in similar habitat. The project area supports birds and mammals which could be preyed on by goshawks.

Environmental Consequences, Proposed Action: Goshawks migrate from the area in fall and do not return until early summer. Timber harvest activities during the spring/summer period could cause direct impacts by disrupting active nest sites and causing nest abandonment. However with the design feature of buffering the nest site an eighth mile impacts to active nests should be significantly reduced. Indirect impacts would include opening of the forest canopy which could improve habitat conditions for species utilized as prey by goshawks. In addition, the prey base for goshawks could increase as a result of the proposed timber salvage project.

Environmental Consequences, No Action Alternative: This alternative would not change the structure of the vegetation in the project area and would make the area more susceptible to fire since lodgepole pine trees would continue to die and fall to the ground. This could result in a long-term change in the habitat which could adversely impact goshawks since a fire would likely remove more trees than the proposed harvest project.

Mitigation Measures: None.

## **UPLAND VEGETATION**

Affected Environment: Most forest stands in the area are primarily comprised of mature and over-mature lodgepole pine, although there are some aspen stands, as well. Lodgepole pine stands in the area have serotinous cones. In other words, cones may remain on the tree without

opening for one or more years. Cones open and seeds are shed when heat is provided by fires or hot and dry conditions. Many of the lodgepole pine stands also contain minor amounts of other species such as subalpine fir, aspen, and Engelmann spruce. For the most part, younger stands are confined to previously harvested areas. An abundant cover of native grasses and forbs is present throughout both units except tree cover is exceptionally thick.

Unit 1 is a predominately east facing slope with an overstory of predominately large lodgepole pine that has been heavily infested with mountain pine beetle. Most of the lodgepole are still standing, but about three quarters of them are standing dead with the remaining quarter being live, but infested. Other species in this unit include subalpine fir, aspen, and Engelmann spruce.

Unit 2 is a north facing slope with aspen and subalpine fir co-dominate in this unit. Lodgepole pine is also present, but to a lesser degree. Although not many beetle kill lodgepole are present in the area, there are a number of pockets of dead subalpine fir. This unit is more homogeneous than Unit 1, but is still quite variable in terms of species make up and spatial distribution.

Environmental Consequences, Proposed Action: There will be short term disturbance to herbaceous and shrubby vegetation in areas where equipment operates. This vegetation should quickly recover after fuel reduction operations are complete. Significant removal of the tree overstory will result in more sun and soil resources available for the remaining vegetation. Herbaceous vegetation will quickly increase in cover in the formerly forested area. Small woody shrubs such as snowberry, serviceberry, and wild rose will likely also increase in frequency and cover but at a slower rate. The health and growth rate of the remaining trees will increase for many years until natural regeneration of lodgepole pine and other tree species increases to create competition for sun and soil resources.

Environmental Consequences, No Action Alternative: As the lodgepole pine continue to die and needles and small limbs begin to fall off, more sun and soil moisture is available to remaining the live trees (primarily subalpine fir followed by Engelmann spruce and aspen) and forbs and grasses. Herbaceous vegetation and small woody shrubs such as snowberry, serviceberry, and wild rose will increase in frequency and cover but not to the extent or as quickly as described above. In the long term, natural regeneration of lodgepole pine and other tree species will again increase to create tight crown cover and competition for sun and soil moisture.

Mitigative Measures: None

## **WASTE, HAZARDOUS OR SOLID**

Affected Environment: The Resource Conservation and Recovery Act (RCRA) of 1976 established a comprehensive program for managing hazardous wastes from the time they are produced until their disposal. U.S. Environmental Protection Agency (EPA) regulations define solid wastes as any “discarded materials” subject to a number of exclusions. The Comprehensive Environmental Response Compensation and Liability Act (CERCLA) of 1980 regulates mitigation of the release of hazardous substances (spillage, leaking, dumping,

accumulation, etc.) or threat of a release of hazardous substances into the environment. Civil and criminal penalties may be imposed if the hazardous waste is not managed in a safe manner and according to regulations. The Colorado Department of Public Health & Environment (CDPHE) administers hazardous waste regulations for oil and gas activities in Colorado.

There are no known hazardous materials present in the fuels reduction area. The cabin to be removed has not been fully surveyed to determine definitively if hazardous materials are present or not. There is a refrigerator inside that will likely have Freon extracted from it before it can be taken to a landfill. The cabin is constructed primarily of logs with a wood shingle roof so no hazardous construction materials are expected.

Environmental Consequences, Proposed Action: Potential releases of hazardous materials could occur due to vehicle and equipment operations on site. Coolant, oil, and fuel are materials that could potentially be released during logging and cabin removal operations. The potential for releases of any of these materials is low and if a release were to occur, it would be minimal and highly localized and not result in an adverse impact to the area. The refrigerator will need to have the Freon extracted from it before it can be taken to a landfill. If other hazardous materials are discovered in or around the cabin, special disposal procedures may need to be implemented.

Environmental Consequences, No Action Alternative: No additional threat of hazardous materials releases would be present beyond what little risk is already present from incidental vehicle use in the area. Because the cabin would not be removed, if hazardous materials are present in the cabin, the potential for release will grow over time as the cabin's condition deteriorates.

Mitigative Measures: The project would be regulated under the Resource Conservation and Recovery Act (RCRA) Subtitle C regulations, which are extremely stringent, as well as the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) that provides for the definition of hazardous substance, pollutant, and contaminant. The mitigation would include the stringent regulation of waste containment within the project area. No hazardous materials, hazardous wastes, or trash will be disposed of on public lands. Trash must be hauled to a landfill permitted by the Colorado Department of Public Health and Environment (CDPHE). All contractors must comply with applicable Federal and State laws dealing with the storage and disposal of chemicals, petroleum, petroleum products, Resource Conservation Recovery Act (RCRA) Subtitle D solid and RCRA Subtitle C hazardous waste. Under no circumstances may chemicals, petroleum, petroleum products, or RCRA Subtitle C hazardous wastes be disposed of in solid waste disposal areas within the project area.

## **WATER QUALITY – SURFACE**

Affected Environment: Surface runoff from the proposed project sites would flow north and west into Willow Creek, a perennial tributary to the Elk River. Water quality for the mainstem of the Elk River, including all tributaries and wetlands, must support Aquatic Life Cold 1, Recreation E, Water Supply, and Agricultural beneficial uses. There are no water quality impairments or suspected water quality issues for waters influenced by the project area considered in the

proposed action.

Environmental Consequences, Proposed Action: Minimal surface disturbance would occur with the proposed mechanical treatments. Little to no effect to water quality would be expected to result from implementing the mechanical fuel reduction treatments.

Environmental Consequences, No Action Alternative: No direct effects on water quality are anticipated from selecting this alternative. Indirect negative effects could result if a large wildfire occurred in the area. In this event, substantially more sediment and nutrient loading of runoff waters would likely occur and it would be derived from a larger area of the landscape.

Reference: Colorado Department of Public Health and Environment Water Quality Control Commission. 2010. Regulations #33, 37, and 93. <http://www.cdphe.state.co.us/regulations/wqccregs/index.html>

Mitigative Measures: None

## **WILDLIFE, TERRESTRIAL**

Affected Environment: The proposed project area provides coniferous habitat for a variety of birds and mammals. Rocky Mountain elk, mule deer, moose, and black bears are found in the project area during various times of the year. Use of the area by these species is common during spring, summer, and fall. Winter use is dependent on snow depth and is more common during years of shallow snow depth for deer and elk. However, moose can use the area during winters of deep snow. The project area is mapped by the Colorado Division of Parks and Wildlife as an elk calving area. Small mammals, including pine squirrels and pine marten, inhabit the area on a yearlong basis.

Environmental Consequences, Proposed Action: Wildlife species using the project area would likely move during road construction and timber harvest activities. However, these animals would use adjacent undisturbed habitat and would most likely return to the project area following completion of harvest. This displacement would be short term and animals would move back into the area once the proposed project is complete. With the operations to occur outside of elk calving season (4/16-6/30), impacts to elk during this time are avoided.

The proposed project would benefit wildlife in the area by opening the forest canopy, allowing sunlight and moisture to reach the ground, and thereby facilitating the growth of understory vegetation. A substantial increase in ground vegetation would be anticipated after timber harvest, resulting in more cover and food for ground dwelling birds and mammals.

Environmental Consequences, No Action Alternative: In the No Action alternative, mechanical treatments to harvest dead, currently infested, and beetle/disease susceptible trees, as well as associated actions such as temporary road construction, would not occur. Dense stands of young, regenerated lodgepole pine would not be thinned. The structure of the vegetation in the project area would not change and the area would become more susceptible to a large-scale wildfire. This could result in a long-term change in habitat on a large scale, which for the short term, would be detrimental to most species dependent on lodgepole pine forest.

Mitigation Measures: None

**CUMULATIVE IMPACTS SUMMARY:**

Past and present activities that have influenced the area are residential development, wildlife, recreation, logging, and grazing. Larger tracts of private land have been subdivided for residential development and will likely continue into the foreseeable future. Any management actions implemented by the BLM will have limited cumulative impacts to the area. The results of fuels reduction will be a net benefit to the cumulative impacts assessment. The proposed action is compatible with other uses, both historic and present, and would not add any new or detrimental impacts to those already present.

**STANDARDS**

**PLANT AND ANIMAL COMMUNITY (animal) STANDARD:** The Willow Creek area provides productive habitat for a variety of mammalian and avian species. The proposed action should aid in continuing to meet this standard because it would return more decadent areas to a younger, healthier and more productive state. The greater potential under this alternative for creating landscapes composed of several plant communities that vary in successional stages and patterns would contribute to meeting this standard.

**SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (animal) STANDARD:** There are no known threatened or endangered animals or suitable habitat for such in or near the affected environment. The standard does not apply.

**PLANT AND ANIMAL COMMUNITY (plant) STANDARD:** Some localized surface disturbance will occur which will temporarily affect the local plant community. The herbaceous plant community is presently very healthy and should recover well after the project is complete and should continue to meet this standard. Removing dead and dying trees will have a positive impact on the overall plant community in the long run.

**SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (plant) STANDARD:** There are no federally listed threatened or endangered or BLM sensitive plant species present within or in the vicinity of the proposed treatments. This standard does not apply.

**RIPARIAN SYSTEMS STANDARD:** There are no riparian or wetland resources identified on federal lands within or immediately adjacent to the project area. This standard does not apply.

**WATER QUALITY STANDARD:** The proposed action would meet the public land health standard for water quality. Surface disturbance would be insufficient to cause water quality issues as a result of accelerated soil erosion. There are no water quality impairments or suspected water quality issues for waters immediately influenced by the project area.

**UPLAND SOILS STANDARD:** The project may cause some short term soil instability on the area targeted for fuel reduction but mitigating to the extent possible the potential for large wildfires will reduce large scale erosion over the long term. This standard would continue to be met with project implementation.

**PERSONS/AGENCIES CONSULTED:** Uintah and Ouray Tribal Council, Colorado Native American Commission, Colorado State Historic Preservation Office.

**ATTACHMENTS:** BLM produced map of project area.

**SIGNATURE OF PREPARER:** /s/ Dale Beckerman

**DATE SIGNED:** 01/12/12

**SIGNATURE OF ENVIRONMENTAL REVIEWER:** /s/ Barbara Sterling

**DATE SIGNED:** 01/18/12

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)**  
**DOI-BLM-CO-N010-2012-0017-EA**

Based on the analysis of potential environmental impacts contained in the EA and all other available information, I have determined that the proposal and the alternatives analyzed do not constitute a major Federal action that would adversely impact the quality of the human environment. This determination is based on the following factors:

1. Beneficial, adverse, direct, indirect, and cumulative environmental impacts have been disclosed in the EA. Analysis indicated no significant impacts on society as a whole, the affected region, the affected interests or the locality. The physical and biological effects are limited to the Little Snake Resource Area and adjacent land.
2. Public health and safety would not be adversely impacted. There are no known or anticipated concerns with project waste or hazardous materials.
3. There would be no adverse impacts to regional or local air quality, prime or unique farmlands, known paleontological resources on public land within the area, wetlands, floodplain, areas with unique characteristics, ecologically critical areas or designated Areas of Critical Environmental Concern.
4. There are no highly controversial effects on the environment.
5. There are no effects that are highly uncertain or involve unique or unknown risk. Sufficient information on risk is available based on information in the EA and other past actions of a similar nature.
6. This alternative does not set a precedent for other actions that may be implemented in the future to meet the goals and objectives of adopted Federal, State or local natural resource related plans, policies or programs.
7. No cumulative impacts related to other actions that would have a significant adverse impact were identified or are anticipated.
8. Based on previous and ongoing cultural surveys and through mitigation by avoidance, no adverse impacts to cultural resources were identified or anticipated. There are no known American Indian religious concerns or persons or groups who might be disproportionately and adversely affected as anticipated by the Environmental Justice Policy.
9. No adverse impacts to any threatened or endangered species or their habitat that was determined to be critical under the Endangered Species Act were identified. If, at a future time, there could be the potential for adverse impacts, treatments would be modified or mitigated not to have an adverse effect or new analysis would be conducted.
10. This alternative is in compliance with relevant Federal, State, and local laws, regulations, and requirements for the protection of the environment.

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)**  
**DOI-BLM-CO-N010-2012-0017-EA**

I have reviewed the direct, indirect and cumulative effects of the proposed activities documented in EA No. DOI-BLM-N010-2012-0017 EA. I have also reviewed the project record for this analysis and the impacts of the proposed action and alternatives as disclosed in the Alternatives and Environmental Impacts sections of the EA. Based upon a review of the EA and the supporting documents, I have determined that the project is not a major federal action and will not significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area. Because there would not be any significant impact, an environmental impact statement is not required.

**SIGNATURE OF AUTHORIZED OFFICIAL:** /s/ Matthew Anderson for  
Wendy Reynolds, Field Manager

**DATE SIGNED:** 01/18/12

**Decision Record**  
DOI-BLM-CO-N010-2012-0017-EA

**DECISION AND RATIONALE:**

I have determined that approving this fuels reduction project is in conformance with the approved land use plan. It is my decision to implement the project with the specified mitigation measures. The project will be monitored as stated in the Compliance Plan outlined below.

**MITIGATION MEASURES:** The mitigation measures for this project are described in the environmental impacts section of the environmental analysis for cultural resources, paleontology, hazardous materials, and realty authorizations.

**COMPLIANCE PLAN(S):**

**Compliance Schedule**

Compliance will be conducted during the implementation phase to insure that all specifications and mitigative measures outlined in EA No. DOI-BLM-N010-2012-0017- EA are followed. If contracted, contractor performance and progress will be documented by the assigned Contracting Officers Representative.

**Monitoring Plan**

Following implementation, the treated area will be mapped and filed with the project file and a copy given to the range staff. Photo plots will be established and new photos taken each year for the following three years to document vegetation response to the treatment. This monitoring will help determine the treatment effectiveness and document the need for additional mitigative measures or specification changes for future projects.

**Assignment of Responsibility**

Responsibility for implementation of the compliance schedule and monitoring plan will be assigned to the Fire Management Specialist in the Little Snake Field Office.

**Administrative Review or Appeal Opportunities**

This decision is effective upon the date the decision or approval by the authorized officer. Under regulations addressed in 43 CFR Subpart 3165, any party adversely affected has the right to appeal this decision. An informal review of the technical or procedural aspects of the decision may be requested of this office before initiating a formal review request. You have the right to request a State Director review of this decision. You must request a State Director review prior to filing an appeal to the Interior Board of Land Appeals (IBLA) (43CFR 3165.4).

If you elect to request a State Director Review, the request must be received by the BLM Colorado State Office, 2850 Youngfield Street, Lakewood, Colorado 80215, no later than 20 business days after the date the decision was received or considered to have been received. The

**Decision Record**

DOI-BLM-CO-N010-2012-0017-EA

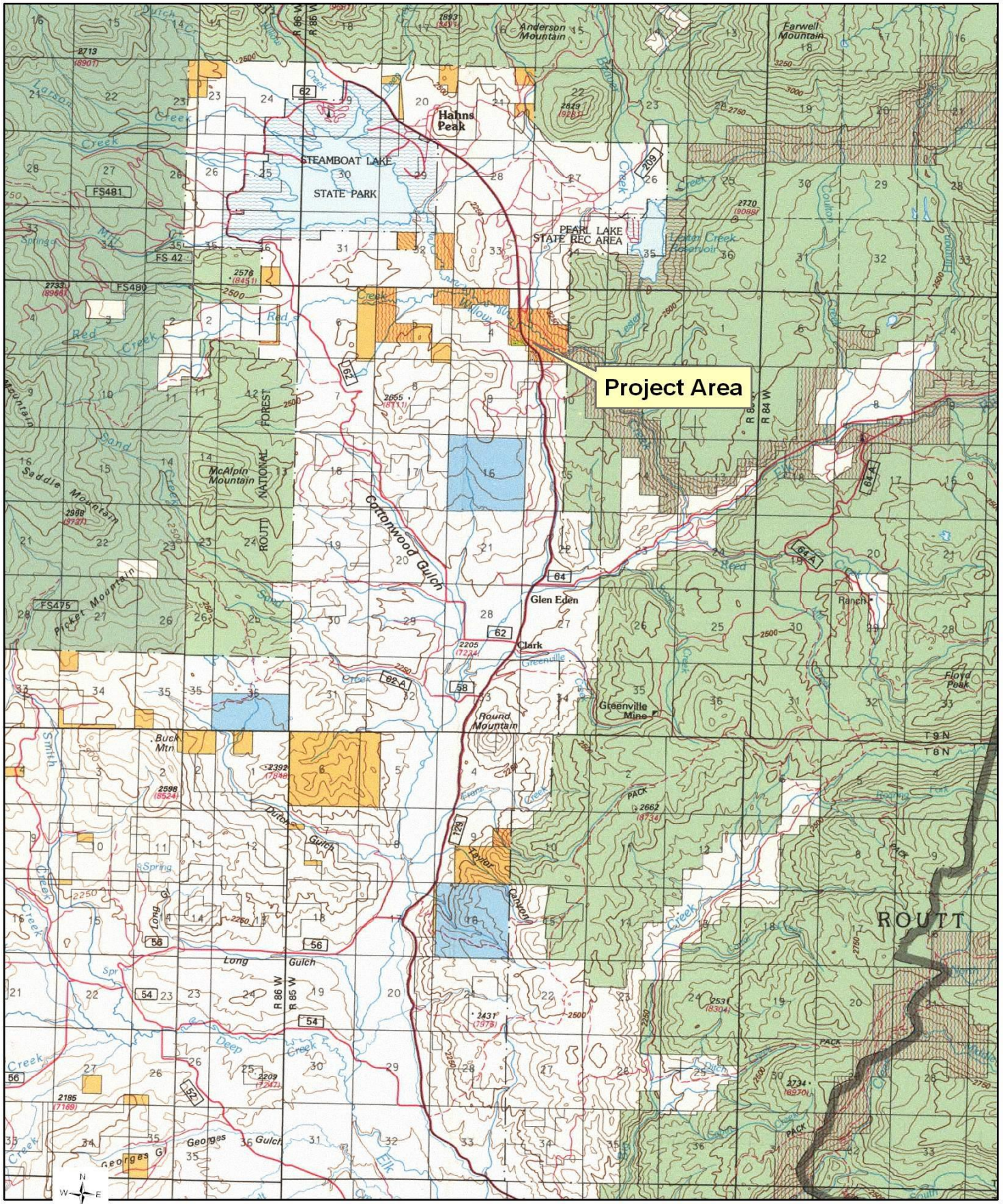
request must include all supporting documentation unless a request is made for an extension of the filing of supporting documentation. For good cause, such extensions may be granted. You also have the right to appeal the decision issued by the State Director to the IBLA.

Contact Person

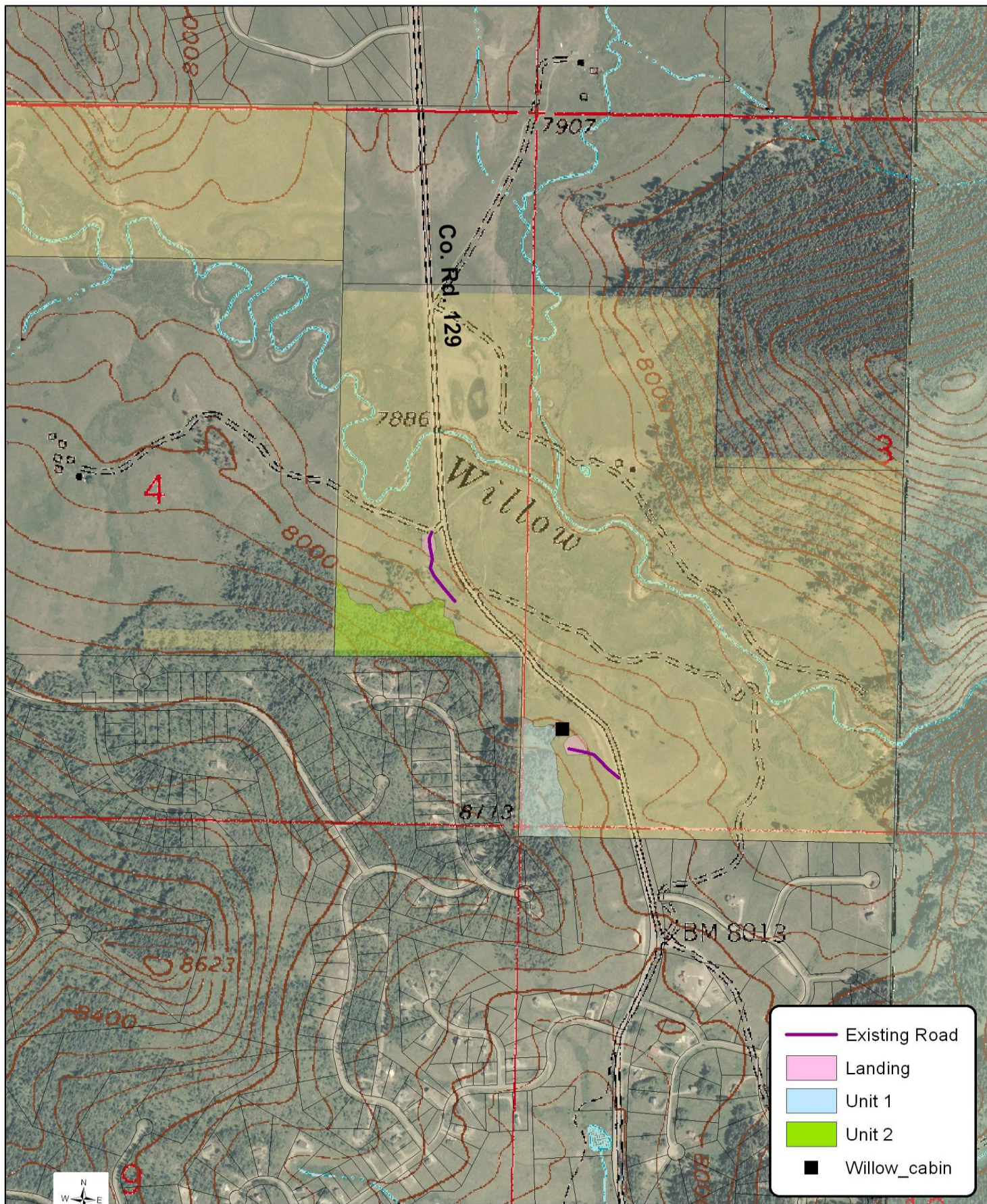
For additional information concerning this decision, contact Dale Beckerman, Fire Management Specialist, Little Snake Field Office, 455 Emerson Street, Craig, CO 81625, Phone (970) 826-5004.

**SIGNATURE OF AUTHORIZED OFFICIAL:** /s/ Matthew Anderson for  
Wendy Reynolds, Field Manager

**DATE SIGNED:** 01/18/12



**Willow Cr. Fuels Reduction Project  
Vicinity Map**



### Willow Cr. Fuels Reduction Project